

REMARKS

Claims 19-36 are now pending in the application, with claims 19 and 25 being the independent claims. Reconsideration and further examination are respectfully requested.

In the Office Action, claims 19-24 were rejected under 35 USC § 101. In response, Applicants have amended those claims above to recite that the computer language is stored on a computer-readable medium, as suggested by the Examiner. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 19-34 were rejected under 35 USC § 102(e) over U.S. Patent 6,226,675 (Meltzer). Withdrawal of this rejection is respectfully requested for the following reasons.

Conventionally, when a Web-based service and a client communicate with each other specific protocols must be observed by both parties. As a result, ad hoc communications are nearly impossible. In addition, even where the protocols have been specifically defined, permitting communication to occur, any desired changes or enhancements to the Web service typically require substantial recoding of both the server and the client logic.

One structural aspect of the present invention is the separation of logic flows (transitions) from the underlying functional units (transactions). As a result, for example, by discovering the transition structure utilized by a particular Web service (e.g., by learning what types of documents to the Web service expects and when), a client often will be able to begin an ad hoc conversation with that Web service. In addition, a particular conversation definition can be modified to accommodate new business processes, often without the need to modify any of the underlying code, e.g., by simply changing the defined transitions.

Still further, the present invention employs a set of transformations that often can further facilitate ad hoc communications by, e.g., automatically converting one type of document used

by the client to another type of document used by the Web service. Such capability often can further free the software developers from having to worry about document mismatches. As long as the general type of document is the same (e.g., the necessary substantive information is included) and the specific document types are supported in the defined transactions or transformations, the two parties generally will be able to exchange documents on an ad hoc basis.

Finally, the separation of document type definitions, transactions, transition structure and transformations according to the present invention often can achieve the advantages described above in an efficient manner. For example, in representative embodiments a central library of transactions and/or transformations is maintained, used and reused by a variety of Web services, thereby creating uniformity, while at the same time providing developers with the ability to easily create and/or modify Web services.

The foregoing combination of features often can provide for flexibility that is not achievable with conventional systems.

In the above amendments, the claims have been amended to clarify that the set of transformations converts one document type in a certain common document structure to another document type which also is in the same common document structure. In the preferred embodiments, as described in more detail in the Specification, the common document structure is an extensible markup language (XML). Regarding each of the foregoing features, see, e.g., page 8 line 4 through page 9 line 8 of the Specification.

Thus, the present invention is particularly beneficial in an environment in which different entities are communicating with each other using a common document structure (e.g., XML), but different document types for different purposes. For example, the different document types

might be individually defined types based on the processes used by the particular entity defining them, as well as any other preferences of that entity.

One example that is discussed in the Specification is where one entity uses a sign-in XML document and another accepts a log-in XML document. See, e.g., page 6 line 19 through page 8 line 18 of the Specification. In this case, the structure of the documents is the same (XML) and the information in the two documents might be identical, or at least compatible. However, generally speaking, even the slight discrepancy in the naming of the two documents and/or the naming of any field in them will prevent the two entities from being able to communicate with each other.

The transformations of the present invention permit such communications to occur. Moreover, such transformations are a separately defined component of the computer language or conversation controller, as applicable. As a result, such transformations generally can be changed independently of any underlying processes and generally need not be changed unless either or both document types change.

In contrast, Meltzer only appears to discuss a transformation from a received document to a machine-readable format that can be directly processed by the recipient. See, e.g., column 21 line 41 through column 22 line 8 (which includes the portion of Meltzer cited in the Office Action with respect to the transformations). This is nothing more than what almost necessarily is done by every computer operating over the Web.

Because the transformation in Meltzer is specific to the process that is being performed, any changes in that underlying process necessarily must also be reflected in changes to the transformation. Thus, Meltzer lacks the decoupling of transformations in the present invention. In addition, Meltzer does not disclose a set of transformations that convert one document type in

a certain common document structure to another document type which also is in the same common document structure.

For at least these reasons, the pending claims are believed to be allowable over the applied art.

In order to sufficiently distinguish Applicants' invention from the applied art, the foregoing remarks emphasize several of the differences between the applied art and Applicant's invention. However, no attempt has been made to categorize each unobvious difference. Applicants' invention comprises all of the elements and all of the interrelationships between those elements recited in the claims. It is believed that for each claim the combination of such elements and interrelationships is not disclosed, taught or suggested by the applied art. It is therefore believed that all claims in the application are fully in condition for allowance, and an indication to that effect is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to being conditioned for allowance, and an indication to the effect is respectfully requested.

If there are any fees due in connection with the filing of this paper that have not been accounted for in this paper or the accompanying papers, please charge the fees to Deposit Account No. 08-2025. If an extension of time under 37 C.F.R. 1.136 is required for the filing of this paper and is not accounted for in this paper or the accompanying papers, such an extension is requested and the fee (or any underpayment thereof) should also be charged to Deposit Account No. 08-2025. A duplicate copy of this page is enclosed for that purpose.

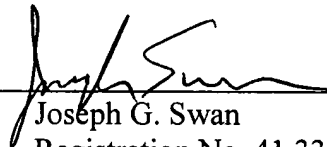
Respectfully submitted,

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